HEALTH

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

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Notes by the Way

"Health is the foundation of all our physical happiness."—*Herder.*

THAT the "fair girl graduates," or their representatives in our schools are, at last, to have an equal chance with boys of developing a healthy body as well as a cultured mind, seems to be a prospect of the near future, if not of the actual present. Mr. J. R. Mozley, Inspector of Poor-Law Schools, has lately borne testimony to the excellence attained by girls in physical exercises. This gentleman examined the moral and industrial training schools at Swinton, belonging to the Manchester Guardians. He found there about 200 children who had been carefully trained in swimming, and in the competitions which took place the girls excelled the boys in the aquatic sports. One girl swam 600 times round the bath, a distance equal to eight miles—certainly a very extraordinary distance for any young person to accomplish. The first boy only accomplished 504 times round the bath. At these schools also the girls are taught "wand" exercises (similar to those at present being described in Mr. Standage's papers in HEALTH) and dumb-bell exercises are also performed to music.

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THESE facts indicate that an important educational advance is being effected in certain districts. It is most desirable that all schools should be provided with an "exercise room," properly fitted with appliances for ensuring, in a scientific and carefully-regulated fashion, the full development of bones and muscles. That inimitable philosopher, Dr. Pangloss, in "The Heir at Law," when informed by Lady Duberly that, in addition to walking out with the lap-dogs, the tutor of the family should teach dancing, is made to remark that "his business is with the head, not the heels, of his pupil." But, after all, the "heels" are really as important from a health point of view as the "head," seeing that only in a healthy body can the mind attain its fullest development. We shall grow wiser in time, no doubt, and imitate Sweden in her adoption of a system of gymnastic exercises, which, like that of Ling, shall be practised in every school, and shall be made a means of occupying, agreeably and usefully, part of the time allotted for play.

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THERE is one idea, however, which the public will require to understand a little better than at present, before the subject of physical exercises in schools can be fully encouraged by parents. The word "gymnastics," as commonly understood, is believed to refer to exercises more or less of acrobatic character. The moment this word is mentioned there rises before the mental vision of many persons a scene in which dangerous feats of strength, never witnessed outside the walls of a circus, form the chief item. There can be no greater mistake than to suppose that the "gymnastics" which physiology advises as suitable for the school bear any relationship either to violent exertion or to dangerous athletics. On the contrary, the exercises of the school are specially graduated to the ages of the pupils, are never excessive or violent in their nature, and are arranged so as gradually and consistently with natural growth to develope to the full the frames of the boys and girls who take part in them. When a parent declares that he won't allow his boy or girl to attend the school gymnastic class on account of any presumed roughness or violence, it is clear he does not comprehend what "physical exercise," in its true sense, means. A visit to any of the schools where such exercises form a part of the curriculum, would serve to dispel all false notions regarding this subject, and would show how weak chests, pigeon breasts, and stunted frames at large are made, by gentle exercises willingly undertaken, to develope into healthy bodies, which will stand the strain of life and existence when, as weakly subjects, they would have gone to the wall in the inevitable struggle which awaits the toilers and moilers of the earth.

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CREMATION is decidedly "looking up." Dr. Sedgewick, the Medical Officer of Health for the City of London, declared at a recent meeting of the Court of Sewers, that cremation was the least objectionable method of disposing of the dead, since the process could be effected without nuisance or injury to health. It is intended to move for a Select Committee to consider and report whether it was not advisable that a proper "crematorium" or furnace should be erected at Ilford Cemetery, that the London public might adopt that method of "burial" if they wished. As a means for absolutely destroying disease-germs, for preventing water contamination, for removing nuisance from the very centres of towns, we repeat, cremation is unrivalled as a health measure.

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MORE news about the cholera-bacillus, or germ. The cholera-germs, or, at least, the living particles which are found associated with that disease, are described as unlike other bacilli. They are not quite straight, or rod-like, but slightly curved, and resemble the "comma" of punctuation in shape. Hence, this bacillus will, in all likelihood, be familiarly known as the "comma-bacillus." These germs exhibit lively movements. When sown in nutritive gelatine, they form regular colonies in that substance. Their curvature may be so marked as almost to present a semicircular form. These germs were found in the discharges of cholera-patients, and have not been met with in any other disease. They were not found to occur in dirty water taken from various sources. Dr. Koch, whose sixth report (dated from Calcutta, Feb. 2), gives these particulars, argues very forcibly that these germs are the *cause* of the disease. The growth of this bacillus, he maintains, can only be favoured by the cholera process, or it is the actual cause of the disease, which is only induced when the living germ is conveyed into the intestine of man. If the first supposition were correct, Dr. Koch contends, we should find the germs always resident in the intestine awaiting only the cholera infection to stimulate their growth. But they are not so resident as normal tenants of the human intestine, and as they only occur (as far as is at present known) in

cholera subjects, the inference that they cause the disease thus appears as the only feasible theory of their nature.

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These views, of course, by no means settle the question of cholera germs, or of the origin of the disease. They pave the way, however, for further researches, and afford a basis of observation on which may be erected the superstructure of the future. It would be well, in our opinion, if, for the present, some of our medical contemporaries suspended their criticism of Dr. Koch's reports until the complete series of observations has been presented. Dr. Koch is labouring in India with a zeal born of true scientific enthusiasm, and nothing is easier than to criticise—we had almost said carp—at views which may appear to reveal startling departures from old methods and ways of thought. Dr. Koch is the last man, we should imagine, to object to criticism; but he might very fairly advise certain of his English critics to "learn to wait," as he himself has certainly learned to labour.

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A sad instance of the rapidity with which an irritant poison may act upon the system has recently been afforded by the case of a young Frenchman, who, foolishly imitating the highly dangerous practice of scratching a match with his nail by way of lighting it, infected the tissues of the finger with the phosphorus of the match. Rapid inflammation, as is usual in such a case, set in, and amputation of the arm—the only possible remedy—having been delayed, the sufferer died in a few hours after the receipt of the injury. The practice of igniting matches with the nail is not quite extinct amongst ourselves; and it seems necessary to enter a grave warning once more against its danger.

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"A Mother" writes, giving an interesting case of inherited peculiarity, which, although it does not come precisely within the category of transmission of an artificial injury, is yet worth recording, if only to prove how trivial marks of parents may reappear in the offspring. Her first child, a boy, at present aged 21 months, was seen, shortly after birth, to possess two small holes, each about the size of a pin's head, in "the upper part of each of his ears." The mother's attention was drawn to the peculiarity by her husband, who remarked the fact (of which till then she was completely ignorant), that he possessed the same marks, situated in precisely the same position as they occupied in his son. Further inquiry, amongst the relatives, showed that the child's grandfather (on the paternal side) possessed the same peculiarity of ears. No information could be obtained respecting the original cause of the peculiarity. It is striking to find such markings, not only so faithfully propagated, but descending strictly on the male side for three generations. There is no trace of the marks in the second child—a girl—of the family. It is probable that, if public interest were sufficiently aroused in this subject, we should hear of many cases in which artificial injuries had been reproduced with striking fidelity in the descendants of those who originally suffered from the lesions in question.

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Recently, we gave the statistics of Parisian suicides. It is interesting to compare the shady side of life in New York with that of the French capital. In 1883, 124 men and 27 women committed suicide in New York. Of these 78 were married, 43 single, and 24 widowed or divorced. Nine were under 20 years of age. Germans stood at the head of the list, with 70 suicides. Death by shooting occurred in 56 cases; by hanging in 19 cases; by wounding in 15; by drowning in 12; by falling from heights in 11; while 18 persons poisoned themselves with "Paris green," and 7 with opium.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE WORKING MAN'S AMUSEMENTS.—A CRITICISM.

By H. R. Dumville, B.A., &c.

There are some subjects that are highly popular—subjects that a man may, as it were, lecture to his fellow-beings about from a superior height of self-complacency and patronage. Among such subjects none are more fascinating than those which concern the welfare of the people, whether morally, socially, or politically. They have been discussed and debated times without number by statesmen, social reformers, and clergymen alike, but up to the present—socially at all events—with very little result. The actual masses of the people have not been reached. For ourselves, we must confess that we are scarcely surprised at it. When we consider how fearfully the people have been patronised by the high personages who have professed to have their interests at heart, and what an aggravating amount of sentiment has been imported into their conversion—how they have been offered, as it were, practical help with the right hand and sentiment with the left, the conditions being that they might have the one if they took the other—under these circumstances, we say, we are not surprised if the people have refused the proffered assistance, and have indignantly drawn back and desired to be left to themseves, contending that they were in need of no protection, and could do very well as they were. Actual sympathy, genuinely felt and expressed, without any affectation of superior goodness, they could understand and would appreciate, but patronised they declined to be. Strange as it may seem, the people have their feelings like every one else.

The latest advocate of their interests is Mr. Walter Besant, the well-known novelist, who, in an article in this month's *Contemporary*, writes of the "Amusements of the People," strongly urging the claims to recognition in this respect of the proposed Palace for the People in the Mile End-road. Let us in the first place do Mr. Besant every justice. We believe that he has the well-being of the people thoroughly at heart, that he feels very acutely every word he says, that he is, indeed, a perfect enthusiast in the matter; and that his remarks are entirely free from that spirit of offensive patronage of which we have previously spoken. But he is not practical—he hastily rushes to conclusions from ill-considered facts, or what he considers to be facts. The realms of imagination and the abode of fact are widely apart, and it is seldom you find a man who can excel in both. But, perhaps, a slight review of Mr. Besant's article may not be uninteresting to our readers; nor shall we apologise for placing such a subject before them, for though to some people its consideration may seem a little out of place in a journal devoted to the spread of domestic and sanitary science, it is not in reality so, since the healthy state of the mind as administered to by cheerful amusements lies as much within our province as the health of the body—indeed, one has often very much to do with the other.

According to Mr. Besant, the working man of to-day has few amusements. A hundred years ago, he could go baiting bulls and torturing unhappy bears; he could "draw" badgers and indulge in the intellectual sport of cock-fighting; he had the most stubborn prize-fights, which anybody might see; public executions, open-air floggings, wrestling combats, the charms of cudgelling and quarter

staff, the pillory, and the stocks, and a variety of other pastimes, all of which have now-a-days been taken from him—apparently not much to his regret. His amusements now consist of the theatre, the music-hall, the public-house, the Sunday excursion, and the parks; not to mention enjoyments of another kind, such, for instance, as suburban gardens (like Rosherville and North Woolwich, in London), where there are entertainments of all kinds, and dancing; tea-gardens, harmonic meetings, debating societies, &c. We should have thought after this that the working man was not so badly provided with amusements after all. We know many of our fellow-beings, not, strictly speaking, working men, who are not one whit better situated, and who never complain; but Mr. Besant is evidently determined to make the working-man a very mournful creature indeed. In this, the special aptitude of the novelist, the desire to make an artistic effect, shows itself, and he is unconsciously led away by the picture he has created. "He can read," says Mr. Besant. Certainly that is a decided advantage to him, if he have the material; but, then, *what* is he to read?—*where* is he to read? Books are expensive, and there are only six free libraries in all London, one for each half-million people. Still, Mr. Besant acknowledges, few as these are, they are not overcrowded, so far as he is aware. Surely this is putting his foot into it with a vengeance. What is the logical inference? Why, that the working man does not desire to read—that he does not recognise his deficiencies. If he will not take advantage of the existing accommodation that is free to him, how can he be expected to patronise even the People's Palace, in this department, when it be opened? Certain, however, it is that his red-hot, ultra-Radical newspaper, breathing fiery denunciation upon everybody and everything, seems quite sufficient for him at present, when he reads at all; and he is contented.

The chief cause of complaint that Mr. Beasant would seem to have against the working man, and which he would desire to remove, is that he has no resources within himself. All his amusements have to be found for him. He has no accomplishments like the man in a higher station in life. He cannot play cricket, football, tennis, or racquets; he has no gymnasium where he may practice; he cannot row; he knows nothing of dancing, swimming, singing, or acting. Truly, to us this seems an overdrawn picture. The working-man would laugh if he only knew what was said about him. Why, he can play cricket and football like anybody else if he have a mind—many of the large employers of labour have actually clubs in connection with their works, and these fight their battles under the name of the firm; and as for rowing and swimming, he has equal opportunities, too, for practising them. But perhaps Mr. Besant will reply to this, "Oh, but the man I was speaking of has not the money to join a club or go to a public bath, even of the cheapest; he has only just sufficient to keep himself and family." Then why did Mr. Besant mention the music-hall and public-house? He has money enough to go there. Truth to say, Mr. Besant is somewhat inconsistent; he has apparently but a faint idea of what he means himself, or of the particular type of workmen of whom he is speaking, and it is an equally indistinct impression he produces upon his readers. Perhaps it would be as well if the working man *were* taught some useful accomplishments, such as probably would be of interest to him on account of his daily occupation, or, if not, such as his inclination dictated; but are there not mechanics' institutions dotted all over the country where he can obtain this instruction at very trifling cost, if he likes to take advantage of his opportunities? And this draws attention to an especial point of obscurity in Mr. Besant's article. Is he speaking of the general body of working men all over Great Britain, or only of that portion which is found in London? From his treatment of his subject it would seem that he alludes exclusively to the latter. Then why does he not say so? Why style his paper "The Amusements of the People," when, in reality, it is only the amusements of the London working man he refers to?

However, there is only one thing that is evidently very clear in Mr. Besant's mind—he believes in the capability of the People's Palace to remove all these hardships and difficulties of which he speaks. It is, indeed, to be a perfect haven of rest for the London working-man, and to solace him for all his troubles. He is to have, in the first place, class-rooms, where all kinds of study can be carried on—the instructors to be, as far as possible, working-men themselves (this will not be possible at first, but there is no reason, Mr. Besant points out, why it should not be feasible after a time); secondly, concert rooms; thirdly, conversation rooms; fourthly, a gymnasium; fifthly, a library; and, lastly, a winter garden. "In other words," says Mr. Besant, "it is to be an institution that will recognise the fact that for some of those who have to work all day at, perhaps, uncongenial and tedious labour, the best form of recreation may be study and intellectual effort; while for others—that is to say, for the great majority—music, reading, tobacco, and rest will be required."

Now, all this sounds very nice—particularly nice, but will it do? will it achieve the desired effect? Not for the world would we throw cold water on any scheme for the amelioration of the working classes, but, candidly speaking, we are afraid it will not serve the desired end. And the first great objection we have to the Palace is its size. Much of the good that would arise from such an institution would be through its social influence. But the social influence of so huge a building would be practically *nil*. The working man would never get to know his "mates" in such a mansion; he would feel lost and deserted; and, probably, after the first two or three visits, it would be difficult to get him to visit the Palace any more. He would prefer his own smaller and cosier public-house, where he was more at home. He might go sometimes for entertainments, but that would be all, so that the social and refining influence would be entirely lost on him. Of course, it would do good, but not to the extent imagined. Another objection we have to it is its distance from certain localities that are almost as crowded as the Mile End-road. For, as we take it, the Palace is intended, not only for the people in the immediate neighbourhood—certainly a very neglected and ill-amused part—but for the whole of London; indeed, it will be the only institution of its kind in the metropolis. Will the working-man go so far for his amusement? Scarcely. No; a better idea seems to us the establishment of a series of such places on a smaller scale all over London, wherever the population is most crowded, after the fashion of the working-men's clubs, which have been so successful

Medical and Sanitary Exhibition, 1881.—Award of Merit.—Diabetes. Van Abbott's Gluten Bread, and all other suitable Foods for Diabetic Patients. Dietary Tables and Price Lists post-free on application. Van Abbott, 5, Princes-street, Cavendish-square, W.—Delicate Children and Adults Suffering from Nervous Depression. Van Abbott's Hypophosphite of Lime Biscuits, for Delicate Children, especially those suffering from Deficiency of Bone, Weak Joints, or Debility, and Adults suffering from Nervous Depression. Each Biscuit contains five grains of the Hypophosphite of Lime. "Quite free from disagreeable taste, and taken willingly by Children, and certainly provide an excellent means of administering this valuable compound. Our analysis proves the accuracy of the printed descriptions on the labels of the boxes. The Biscuits were suggested by Mr. W. Adams, of the Orthopædic and Great Northern Hospitals." — *Lancet*, Nov. 4, 1876.—Van Abbott, 5, Princes-street, Cavendish-square.—[Advt.]

in some of the provincial towns—Manchester, for instance. They certainly would not be able to offer the advantages of tuition; but, from a social point of view, they would be eminently more successful. In all other respects they could be conducted on the same principles as the People's Palace, and there might be a general managing committee to superintend the entire body. We commend this idea to all who are interested in the subject.

But it is possible to go even still deeper into the matter, to get as it were still closer to the root of the evil. Would it not be better to increase the attraction of the working-man's *home* amusements, to render that home more habitable for him, and the inducement to his friends to visit him there greater? We certainly think so. Much has been done in this direction in the past, much is still being done, and much—by far the larger proportion — remains to be done. The dwellings of the working-classes, however, are gradually being improved; old, ill-ventilated buildings are being pulled down and new ones built; stacks of over-crowded, dilapidated houses, positively reeking with disease, where it is almost impossible now to believe that human beings ever dwelt, are being swept away; habits of thrift and cleanliness are being inculcated among the poorer classes, and everything presages a brighter era for the working man than he has ever known before. It is with this conviction that we write this paper; it is with this conviction that we earnestly ask our readers to aid in bringing about as individuals and communities so desirable a consummation.

DISEASE GERMS AND THEIR RELATIONS.

By Dr. H. Fol of Geneva.

(Translated from the *Journal de Genève.*)

THIRD PAPER.

Intermittent fevers afford a good example of how easily errors arise and spread. They were at first, and without sufficient evidence, said to be caused by the palm-trees, comparatively high vegetable types, perfectly innocent of the crime of which they were accused. Late investigations point to a *bacterium* (or rod-like living particle) as the cause, but the proofs are still insufficient. To learn to recognise the enemy is certainly the most necessary thing to be done, but it is only half the task; we must then learn to resist it. The more or less effective means of combat which have been employed up to the present time have aimed, 1, to prevent the dissemination of dangerous germs; 2, to make the organism unsuitable for the propagation of the intruders; 3, to retard, as far as possible, the growth of those which have entered, in order to give the organs opportunity to throw them off. The first of these measures engrosses the attention of the health-reformers—hospitals, quarantines, and disinfectants are among the means employed. I will not enter upon a subject which touches so many disputed questions, but will confine myself to noticing certain facts and to rectifying certain very widespread errors.

Regarding infection, the nose is a poor guide; for the experiments of Mr. Miquel show very distinctly that substances in a state of putrefaction, so long as they are moist, do not emit living germs. The water of the Paris sewers holds eighty millions of germs per litre; and yet the air of the sewers contains only eight hundred or nine hundred germs per cubic mètre, about one-tenth the number found in a hospital. By inoculating a rabbit, it was shown that these germs are perfectly harmless. The moist earth does not give out living organisms to the atmosphere. On the contrary, the dust of our rooms, which we do not at all mistrust, shows about two millions of these living germs per gramme. The bacteria of intermittent fevers, which vegetate in the soil of the Roman Campagna, begin to spread in the air and to become dangerous only when the soil, dried by a scorching sun, is raised by the wind in the form of dust. It would be easy to multiply examples, and to prove that, in point of hygiene, we must be guided by sense rather than by smell. We have as yet but begun this kind of study; for how does this total number of germs which the air or water holds interest us? We would prefer to know the number of dangerous germs. The proportions would doubtless be very different from those which concise analysis affords.

Until we are better informed, we shall do well to push cleanliness to an extreme, and especially to put little trust in disinfection. The number of substances which are less injurious to man than to microscopic-parasites is very small. The best disinfectant is perfectly useless if too weak a dose be used. For each of these substances there is one proportion which will destroy the germs, and another which will arrest their vegetation but not destroy them. This last dose is the one with which we are generally obliged to content ourselves. The experiments of Dr. Koch and Mr. Miquel show that the narcotic effect begins to be effective on germs only when the substance in which they are vegetating contains, among a thousand parts, 95 parts of alcohol, or 70 of borax, or 10 of salicylate of soda, or 3·2 of carbolic acid, or 5 of quinine, or 0·6 of bromine, or 0·07 of bichloride of mercury, or 0·05 of oxygenated water. Certain of the substances indicated are useful in these doses; while others, as bromine, are impracticable. But especially let us not forget that the result is not a radical disinfection: it is merely a momentary weakening. Is it still needful to insist on the uselessness of too mild doses? We are constantly seeing carbolic acid used at less than one in a thousand parts, with the sole effect of creating a mistaken sense of security. Let me mention another almost unknown antiseptic: essence of turpentine, according to Dr. Koch, arrests the vegetation of microbes in a dose of $\frac{1}{75000}$, a quantity easily endured by man.

All these hygienic precautions are bristling with difficulties How convenient it would be to let the microbes live and to protect our bodies from their influence! Unfortunately we know but one way to effect this: it is based on a remark, made long ago, that certain diseases can be retaken only after many years, and that this freedom may be obtained by contracting the disease in a very mild form. This is the

Dr. Nichols' Penny Vegetarian Cookery-Book.—Every household should possess this marvel of cheapness. Free for 1½d.—Nichols & Co., 23, Oxford-street, London, W.—[Advt.]

The "Boncontour" Stay-Belt and other Orthopædic Apparatus, made by K. R. Schramm, Orthopædic Mechanician, 64, Belmont-street, Chalk Farm-road, London, W.—[Advt.]

Scott's Midlothian Oat-Flour.—There is no preparation which can be assimilated with greater facility than such a flour as this. Those who suffer from indigestion might substitute for their ordinary breakfast materials this flour, prepared according to the recipe given by Messrs. Scott and printed on the tins.—Ed. Health.—[Advt.]

Pure Water is such a vital necessity that, without it, illness is certain. None are more prone to the ill effects when impure than the young. To ensure a pure supply send a post-card to the London and General Water Purifying Company, Limited, 157, Strand, London, W.C., who will return particulars post free.—[Advt.]

principle of vaccination, and also of inoculation, employed by M. Pasteur on certain animals. The matter inoculated contains the germ of the disease from which we wish to protect the subject, but modified by a special cultivation: it is a virus weakened according to the methods of M. Toussaint and M. Pasteur. We touch here upon a question, at present much contested, in regard to the regularity of specific forms of these very low vegetable types. Herr Zopf and the school of Munich believe that the most harmless species can, under certain circumstances, be changed into dangerous ones, and *vice versâ*. The school of Berlin thinks that artificial modifications are only transient and momentary, and that the species may be considered invariable. However this may be, it is certain that, if the inoculations of M. Pasteur have no great practical importance in their present form, they at least have a considerable theoretical value. We may hope that the time will come when it will be possible to vaccinate for all diseases which can seldom be taken a second time. Who knows if it will not end by discovering the nature of the influence which the parasitic invasion exerts on the tissues of our bodies, and in obtaining the same results in a more direct way without inoculation? When we consider the progress of science in the last half of the present century, we venture no longer to answer, "Impossible."

THE ELASTIC SKIN MAN.

This individual is a study of interest, and presents an extraordinary condition. The subject is a man of 35, a native of Nuremberg, apparently healthy, and with a skin which seems normal till it is touched, when a peculiarity is observed. It is movable, extensible, and elastic over the head, trunk, and extremities—in fact over the whole general surface. Taking hold of the skin, it may be drawn out; as, for example, seizing the skin over the breast-bone, it can be drawn over almost his entire face, or that between the shoulder-blades over the back of his head. The distance to which it can be drawn from the surface depends upon the amount of skin grasped. The skin is extremely soft, and none of the movements give him the least pain. Pulling out the skin and holding it in front of a light, the circulation of the blood in the skin only is beautifully seen. The condition is supposed to be due to an absence of the tissue lying below the skin; but it is a question whether this tissue is not present, and attached to the muscles instead of to the skin. The elasticity is shown by the fact that on drawing out the skin and letting it go it flies back. It is more elastic in some directions than in others, more when drawn transversely to the natural lines than parallel with the lines. As far as information extends, the case is almost unique, there not being another case on record except that of a Spaniard about two hundred years ago. The forehead wrinkles naturally; and notwithstanding the amount of manipulation that the skin has undergone, it is exceedingly sensitive. This condition exists in lower animals, and particularly in dogs, cats, and rabbits. There is a condition known as *dermatolysis* which is analogous to that found in this man, but in this disease there is a state of marked skin-enlargement and overgrowth, while in the Elastic man the skin is natural in structure.

Mr. E. C. Stanford has discovered in sea-weeds a substance greatly resembling gum tragacanth, which may be utilised in sizing, colour-mixing, &c. The source from which it is obtained is inexhaustible.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

ORIGIN OF INDIGESTION.

SECOND ARTICLE.

Nature then resorts to more emphatic protests. Sleep comes in the form of a dull torpor that would make a nightmare a pleasant change of programme. The digestive laboratory seems to have lost the discretion of its automatic contrivances; the process of assimilation, in all its details, obtrudes itself upon the cognisance of the sensorium, and urges the co-operation of the voluntary muscles. Contortions and pressing manipulations have to force each morsel through the gastric apparatus; the lining of the stomach has become sentient, and shirks its work like a blistered palate. Special titbits can be traced through the whole course of their abdominal adventures. Undigested green peas roll on like buckshot hot from the smelting-pan of a shot tower. A grilled partridge crawls along like a reluctant crab, clawing and biting at each step. Nausea and headache strive to relieve themselves in spasmodic eructations. Vertigos, like fainting-fits, eclipse the eyesight for minutes together. Constipation, often combined with a morbid appetite, suggests distressful speculations on the possible outcome of the accumulating ingesta. The overfed organism is undernourished to a degree that reveals itself in the rapid emaciation of the patient. The general derangement of the nervous system reacts on the mental faculties, and impairs their efficacy even for the most ordinary business purposes, till the invalid at last realises the necessity of reform. He tries to reduce the number of his meals; but the lengthened intervals drag as heavily as the toper's time between drinks. He hopes to appease his stomach by a change of diet, but finds that the resolution has come too late; the gastric mutiny has become indiscriminate, and protests as savagely against a Graham biscuit as against a broiled pork sausage. He tries pedestrianism, but finds the remedy worse than the evil. The enemy has cut off his means of retreat; the necessitous system has no strength to spare for such purposes as an effort of the motive organs. But nine out of ten dyspeptics resort to the drug-store. They get a bottle of "tonic bitters." They try Dr. Quack's "Dyspepsia Elixir." They try a "blue pill"—in hope of rousing Nature, as it were, to a sense of her proper duty.

Now, what such "tonics" can really do for them is this: they goad the system into the transient and abnormal activity incident to the necessity of expelling a virulent poison. With the accomplishment of that purpose the exertion ceases, and the ensuing exhaustion is worse than the first by just as much as the *poison-fever* has robbed the system of a larger or smaller share of its little remaining strength. The stimulant has wasted the organic energy which it seemed to revive. "But," says the invalid, "if a repetition of the dose can relieve the second reaction, would the result not be preferable to the languor of the unstimulated system? Wouldn't it be the best plan to let me support my strength by sticking to my patent tonic?"

Yes, it would be very convenient, especially in times of

Why Burn Gas?—Adopt Chappuis' reflectors. They supersede gas in daytime, and promote health, comfort, and economy. They are now in great use in private houses. For prospectus address two stamps to (H.) Chappuis, patentee and manufacturer, 69, Fleet-street, London.—[Advt.]

scarcity, if a starving horse could be supported by the daily application of a patent spur. It would save both oats and oaths. Even a fastidious nag could not help acknowledging the pungency of the goad. But it so happens that spur-fed horses are somewhat short-lived, though at first the diet certainly seems to act like a charm. For a day or two, the drug stimulates the activity of the digestive organs as well as of the mental faculties, but the subsequent prostration is so intolerable, that the patient soon chooses the alternative of another poison-fever. Before long, the pleasant phase of the febrile process becomes shorter, and the reaction more severe: the jaded system is less able to respond to the goad, and, in order to make up for the difference, the dose of the stimulant has to be steadily increased. The invalid becomes a bondsman to the drug-store, and hugs the chain that drags him down to the slavery of a confirmed poison-habit.

Circumstances may differ. A dyspeptic who intends to make his own quietus within a month or two, and in the meanwhile has a certain amount of work to finish, would be justified in stimulating his working capacities by all means, in order to improve to the utmost whatever chances of mundane activity may remain to him. But he who intends to stay, has to make up his mind that recovery cannot be hoped for till he has not only discontinued his drug, but expiated the burden of sin which the stimulant outrage has added to the original cause of the disease. Nature has to overcome the effects both of malnutrition and of malpractice. The drug has complicated the disease.

In childhood, chronic dyspepsia is nearly always the effect of chronic tampering with drugs. Indigestion is not a hereditary complaint. A dietetic sin, *per excessum*, a quantitative surfeit with sweetmeats and pastry, may derange the digestive process for a few hours or so, but the trouble passes by with the holiday. Lock up the short-cakes, administer a glass of cold water, and my life for yours, that on Monday morning the little glutton will be ready to climb the steepest hill in the county. But stuff him with liver-pills, drench him with cough-syrup and paregoric, and in a month or two he will not be able to satisfy the cravings of the inner boy without "assisting Nature" with a patent stimulant.

But is it fair to denounce a palliative when the radical remedies have lost their efficacy? What dietetic reform can avail a man to whom oatmeal-gruel has become a poison? How can he invigorate his system by exercise if he is hardly able to support himself on his legs? The asthenic (or weak) stage of the disease can reach a degree when the mere suggestion of gymnastic enterprises is enough to produce a fit of nervous spasms. I have known of dyspeptics who would not have crossed a room to save a pet bird from the claws of a cat, who would have joined an expedition to the north pole as soon as to the skating-ring. Theirs is a sad plight; for a rule that holds good of unnatural habits in general, applies more especially to the chronic establishment of dietetic abuses, namely that the further we have strayed from nature, the longer and wearier will be the road of reform. Before the invalid can restore the health and vigour of his system, he has to restore his *capacity for exercise*. The first object is to create a healthy demand for nourishment. Under normal circumstances, that demand is proportioned to the amount of the organic expenditure. The nursing females of the quadruped-class require a larger amount of nourishing diet than the ordinary wants of the system would account for. During the age of rapid growth, children eat and digest as much food as hard-working men. Diabetes, the first stage of consumption and other wasting diseases, is characterised by an exorbitant appetite. Every increase of muscular activity involves an augmented demand for nourishment; *cæteris paribus*, the man who walks a mile from his shop to his home will digest his supper more easily than he who takes the street car. The hotel-boarder who makes it a rule to walk up the four flights of stairs to his attic will sleep sounder, and awaken more refreshed, than he who uses the elevator. — Dr. Oswald, in *Popular Science Monthly*.

Coarse sawdust soaked in a solution of one in ten of absolute phenol and spirits of wine makes a capital padding when enclosed in loose gauze. So treated it is a powerful antiseptic, very absorbent, and adapts itself to any surface.

Brownish-black Hair Dye.—A very good brownish-black or dark-brown hair-dye may be prepared from the fresh green shells of chestnuts, walnuts, or butter-nuts, by boiling the shells with water, concentrating the liquid to an extract, and dissolving the latter in four parts of diluted alcohol. Before applying this preparation to the hair, the latter must be deprived of fat by means of ammonia, borax, or the carbonate of an alkali.

Another Use of Carbolic Acid.—Some people suffer the most pain and annoyance from ingrowing toe-nails. If the flesh has fully embedded the edges of the nail, and the tissue has become hypertrophied about it, cutting and paring seems but to aggravate the matter. When this is the case drop a very little pure carbolic acid along the borders of the inflamed tissue, and let it soak down beneath the nail. The pain will cease as if by magic, and the irritated flesh will soon make a healthy slough. If now the nail be scraped or filed very thin in the centre only, and from that back to its root, carefully leaving the edges alone, the growth will be directed towards the middle, and a complete cure will result.

Dr. William Pratt writes concerning the subject of marriage and mortality:—"Take the male sex, and it is seen that, from twenty-five to thirty years of age, 1,000 married men furnish six deaths; 1,000 bachelors furnish ten deaths; 1,000 widowers furnish twenty-two deaths. The figures, however, become very unfavourable if the marriage be contracted before twenty. Out of 8,000 young men married before twenty, their mortality has been found to be, before marriage, only seven per 1,000; after marriage, fifty per 1,000. With respect to the female sex we find a similar advantage of marriage over celibacy, but on the same condition. If young girls be turned into wives before twenty, a like mortality befalls them which befalls the other sex. Everywhere young married people from eighteen to twenty years of age die as fast as old people from sixty to seventy years of age. The common sense and common law of Western Europe have with perfect justice marked twenty-one as the age of maturity. After that epoch, however, marriage should be contracted as soon as practicable. It is the healthiest and the happiest life; the best for the individual and for the community."

Scott's Midlothian Oat-Flour.—Messrs. Scott, of 82, York-street, Glasgow, have prepared a singularly pure and nutritious "Oat-flour," which bids fair to take high rank among the food products which are specially adapted for infants and invalids, and for the use of dyspeptics in particular, whose digestion is weak, and whose stomachs refuse to assimilate foods of ordinary kind.—Ed. Health.—[Advt.]

Sanitary Inspections.—Fee for Survey and Report, in London, 2 Guineas. Estimate given and Improvement Works carried out when required.—The Sanitary Engineering Co., 115, Victoria-street, Westminster, S.W.—[Advt.]

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

ECONOMICAL BREAKFASTS, DINNERS, AND SUPPERS.

By Mrs. Thwaites, of Liverpool.

FOURTH PAPER.

Breakfasts.—Eggs dressed in a variety of ways seem naturally to suggest themselves to the minds of most people for breakfast. This being in England an essentially early meal, there is, it is true, one advantage in using them—they are quickly prepared. To be wholesome for everybody, eggs should be eaten before they show any trace of staleness. During the spring and summer months eggs, even imported ones, are so good that they may be classed amongst cheap and wholesome foods. One rule should be carefully observed, not only in dishes composed almost entirely of eggs, but also in those into which they enter to any appreciable extent, as farinaceous puddings, &c—they must not be over cooked. Not only are eggs unpleasant to the taste when over cooked, but they lose their distinct and nutritive qualities, and become indigestible and unwholesome. It is even now, except in a few places in London, difficult to find an omelet that will bear any comparison with the omelets obtainable everywhere in France or Spain. In the latter country, at the smallest roadside inn, a savoury omelet, delicately flavoured and lightly cooked, is to be had at a few minutes' notice.

Even in the simple matter of boiling an egg there is a wrong and a right way. Too many people imagine that if an egg is put into boiling water and boiled for an indefinite period, it is sure to come right in the end. For the perfect boiling of an egg it is necessary to have a small pan of quite boiling water, put in the egg with a spoon, cover quite close and set away from the fire, where there is no fear of the water boiling again; in five minutes the egg will be done, and must be taken out, the white will be set, but at the same time light, while the yolk will be sufficiently cooked and hot.

Poached Eggs.—Put a shallow stew-pan on the fire, with about a quart of water, to which has been added a small teaspoonful of salt and the same quantity of vinegar. When the water boils, break an egg into a small teacup, slip the egg gently into the boiling water, and draw the pan aside; the water should not boil again. Three to four minutes will cook the egg, which must be taken up on a fish-slice, and laid on a piece of freshly-made toast.

Bacon Omelet.—Cut into small dice 2 oz. of fat bacon, put it into a small frying-pan and fry slowly until quite cooked through. There should be about a tablespoonful of fat from the bacon. Beat two or three eggs, according to size, add to them salt and pepper to taste, and a tablespoonful of milk; pour this mixture into the frying-pan over the bacon, keep it gently stirred, and hold the pan in sloping direction, so that the omelet may lie at one side when just set, and very lightly browned on the under side; turn it out on a hot dish. Eat at once.

Eggs and Tomatoes.—Mince a teaspoonful of onion, melt one ounce of butter in a saucepan, and cook the onion slowly in it; put in next, either a cupful of minced tomato or two or three fresh ones, skinned and sliced, season well with pepper and salt, and make quite hot. Fresh tomatoes will need a very little cold water and a few minutes' stewing. Beat three eggs slightly, stir them into the hot tomatoes, keep the pan over a gentle heat, and continue to stir until the eggs are set. Serve on toast.

Dinner.—*Artichoke or Palestine Soup.*—1 lb. of Jerusalem artichokes; they must be well washed, peeled, and thrown as they are done into cold water containing a little lemon-juice or vinegar. Cut them up, put them into a saucepan with 1 oz. butter, a teaspoonful of salt, a quarter of a teaspoonful of pepper, and a pinch of nutmeg; cover with either water or stock that is not very rich; simmer slowly until the artichokes are quite soft; rub them through a sieve. If only water has been used, milk must be added to bring it to a nice consistency; if stock, it is better to use more stock. Heat up, add seasoning if necessary, and serve.

Haricot Mutton.—1 to 2 lb. of the middle part of the neck of mutton; divide it into convenient pieces; next put into a fair-sized saucepan 1 oz. of dripping; when hot put in three small onions, peeled, but not cut; let them brown on all sides, and in the meantime flour and fry the pieces of mutton, with just enough fat to prevent sticking. They must be lightly browned outside, but by no means cooked through. While the two pans are in progress, mix in a basin a good tablespoonful of flour, a teaspoonful of salt, a quarter of a teaspoonful of pepper, one pint of cold water, and a tablespoonful of ketchup; pour this into the pan where the onions are frying; stir until it thickens; then lift the pieces of meat out of the frying-pan as they brown, and put them into the gravy; now cut into small pieces two carrots and one turnip; put them into the frying-pan, and, with the fat left from the meat, fry them for two minutes; put them into the saucepan; stir thoroughly the gravy; cover the pan quite close, and *simmer slowly* over a very gentle heat for at least two hours. It will be necessary to stir the contents of the saucepan occasionally.

Rice Pudding.—The excuse for offering such a simple recipe must be the fact that simple dishes are often spoiled—none more often than this. No more wholesome or palatable dish can be found than a rice pudding properly prepared. Wash 2 oz. rice in cold water, put it into a deep pie-dish, and add a saltspoonful of salt, 2 oz. of West Indian sugar, and a quart of milk. In country places where skim milk can be had, it may be used, but, having been deprived of nearly the whole of its natural fat, there must be added either ½ oz. of butter or 1 oz. of fresh beef suet finely scraped. The pudding should then be set into a slow oven to cook for two and a half to three hours. It should, when done, be a pale brown on the top and quite creamy inside. Whether fresh or skim milk be used, the addition of fresh suet to such a pudding is a capital way to induce children or delicate persons to take fat, the flavour being quite disguised.

Supper.—Steamed fillets of plaice. Skin and fillet a thick fresh plaice, wash and dry the fillets and divide them into two or three pieces. Butter a pie-dish and put in the fish, sprinkle with salt and pepper, squeeze a little lemon juice over, cover the top of the dish with a buttered paper, and set into a pan of boiling water; the water should reach half way up the dish. Time to cook about fifteen minutes.

Alcohol is often recommended as a dressing for burns and scalds, the saturated rag being covered with wadding and the air thus excluded.

Remedy for Comedones.—The remedy is acetic acid, which is conveniently applied in the following way:—Make an ointment of kaolin (potter's clay), four parts; glycerin, three parts; acetic acid, two parts. Cover the part affected in the evening; after several days most of them come out by washing with pumice soap.

Healthy Houses

"A happy home must be a healthy home."—*Anon.*

STEAM-HEATING IN HOUSES.

(From the *North American Review.*)

By Professor Trowbridge.

CONCLUDING PAPER.

The other method, called by a strange misconception "indirect radiation," consists in conveying the steam from the boiler to small chambers constructed for the purpose, in the basement, directly beneath the rooms to be warmed. Here the steam pipe is extended into a coil, or an equivalent arrangement, by which a large amount of steam-heated surface is exposed. Flues for heated air lead from the roof of the chamber to the various rooms to be heated; an inlet duct for fresh air enters the bottom of the chamber, and the coils, or "radiators" are so arranged that the air in rising comes in contact with the heated surfaces, and passes to the apartments to be warmed with the temperature increased to seventy or one hundred degrees Fahr. Low temperature currents only are generated; and as the proper action of the apparatus can be kept up only by a continuity of flow into and out of the space to be heated, the two effects of heating and ventilation are most effectively combined.

A comparison of these various methods must include the cost of the apparatus, the cost of attendance, the cost of fuel, and the incidental advantages and disadvantages belonging to each. The open fire-place possesses the advantage of giving thorough ventilation, but it is the most expensive in fuel. The close stove is highly advantageous in point of economy, where there is little ventilation, and as this is apt to be the rule, it is perhaps the least healthful of all methods as generally applied. Both of these methods become costly in attendance as well as in fuel when the heating of dwellings of many rooms is required, and are inapplicable to large structures and public buildings as they are now constructed. The hot-air furnace system is of all the most difficult to manage, so far as uniformity and control of temperature is concerned. The danger from fire, the dust, the defective ventilation, and the impracticability of heating more than a limited space by a single hot-air furnace are other defects inherent in this system. Steam heating involves greater first cost in apparatus than any other system. When this cost and the cost of attendance and repairs are taken for a series of years, however, it is conceded that there is but little choice between hot-air furnaces and steam-heating apparatus as regards economy.

The special advantages of steam-heating are:—1. The almost absolute freedom from risk of fire when the boiler is outside of the walls of the building to be heated, and the comparative immunity under all circumstances. 2. When the mode of heating is the indirect system, with box coils or heaters in the basement, a most thorough ventilation may be secured, and it is in fact concomitant with the heating. 3. Whatever may be the distance of the rooms from the source of heat, a simple steam-pipe of small diameter conveys the heat. From the indirect heaters underneath the apartments to be heated, a vertical flue to each apartment places the flow of the low heated currents of air under the absolute control of the occupants of the apartment. Uniformity of temperature, with certainty of control, may be thus secured. 4. Proper hygrometric conditions of the air are better attained. As this system supplies large volumes of air heated only slightly above the external temperature, there is but little change in the relative degree of moisture of the air as it passes through the apparatus. 5. No injurious gases can pass from the furnace into the air flues. 6. When the method of heating is by direct radiation in the rooms, the advantages of steadiness and control of temperature, sufficient moisture and good ventilation, are not always secured; but this is rather the fault of design, since all these requirements are quite within the reach of ordinary contrivances. 7. One of the conspicuous advantages of steam heating is that the most extensive buildings, whole blocks, and even large districts of a city, may be heated from one source, the steam at the same time furnishing power where needed, for ventilation or other purposes, and being immediately available also for extinguishing fires, either directly or through force pumps.

It is only to be remarked, finally, that the most thoughtful among our physicians and sanitary advisers realise with anxiety the fact that there is a growing abuse of all these systems, except the open fire, in providing too much heat and too little ventilation. There is no mode of heating which lends itself to the correction of this evil so readily, however, as the steam-heating method. With proper care on the part of architects in arranging inlet ducts for fresh air, and ventilating flues heated by steam coils to accelerate the draft, any desirable degree of ventilation with low temperature currents may be secured. Such arrangements should, however, be studied in advance, and form principal elements in the design of a building, instead of being wholly subordinate, as is commonly the custom, to less important architectural features. It should be regarded as a fundamental principle in architecture, that the first and most important problem to be studied, after the general design of a building is determined, is the proper positions and magnitudes of heating and ventilating appliances for the structure as a whole, and for each room in particular; and not only should the details of the main and cross walls be modified and adapted to these arrangements where it is necessary, but no question of mere architectural propriety or appearance, nor even of convenience in use, should be allowed to interfere with objects so important to health as good and sufficient warming and ventilation.

Overcrowding in Cities.—"The chief dangers are to be found for the most part outside the walls of the dwelling, and arise from the crowding together of people in closely-built towns, and from what Dr. Farr calls 'the density of the population,' or their average proximity to one another. In the olden time, when this country was very much less thickly populated than it is now, and when the struggle for existence was rather between man and wild animals than between man and man; in those days the selection of a dwelling was a comparatively simple matter. It was regarded as sufficient, if it served for a defence against cold and wet, and if it kept the wolves at bay. Men then often lived in caves, or in wattled huts, and although they were exposed to many hardships, and though their filthy and gluttonous habits must have been a serious source of disease amongst them, yet they were spared many of the dangers that attend us now. At least they escaped being poisoned by a neighbour's sewage, and the free winds of heaven would sweep away much impurity from around them. But now we live in very different times. Only a few years ago the great bulk of the population lived in the country or in small towns and villages. Now nearly two-thirds of the people live in cities or large manufacturing towns, and they are constantly flocking to them in ever-increasing numbers."

Recreation and Health

"Health is the vital principle of bliss,
And Exercise of health."—*Thomson.*

CALISTHENICS, OR LESSONS IN PHYSICAL EDUCATION.

By H. C. Standage.

SEVENTH PAPER.—WAND AND RING EXERCISES.

"Now, young ladies, listen to me seriously a moment. In the following exercises you will be taught to gain free control over the use of your lower limbs; and as 'leg' and 'hip' are words that will frequently be made use of, I do not wish you to be inattentive to the exercises by tittering every time I use these terms. I am going to teach you some further use of the wand (Exercise 6). before putting you through more arduous exercises. Therefore, form up in line, with elbow space between each of you; stand erect, right foot pointing to the front, left foot at right angles to it, and let the left hand rest on the left hip, thumb pointing backward. Stretch forward the right hand, so that the arm is horizontal, and hold the wand perpendicularly, and in front of you, one end resting on the floor, the other held by your hand. Now, from this position, still keeping the upper part of the body erect, step out with the right leg as far as you can reach beyond and in front of the wand. In stepping out, keep the wand perfectly steady on the ground, and the elbow straight. The wands I have given you are, you will observe, selected according to your heights, so that the arm, when stretched out, is in a horizontal line with the shoulder. Now, from the position you are now in, spring back to your former erect position of 'attention.' In springing back you will have to press on the toes of the left foot, and slightly bend the left knee.

"Steady, girls; you must not sway about in that manner. This exercise is for the very purpose of rendering you able to keep your balance. Ah! Miss Maud; you are bending the right knee and not the left. That is wrong. Observe, in stepping out there are two ways of doing it: one to thrust the right leg forward perfectly straight, the left leg also being perfectly straight (by straight I mean not bent at the knees), until you recover your erect position. The second way is to throw forward the right leg bent at the knee, so that from the knee to the foot is perpendicular to the ground. When 'recovering' from this position you press on the toes of the right foot for the spring, keeping the knee of the left leg perfectly stiff. Now I shall put you through both these ways of stepping out, and I want you to repeat each ten times successively. On the word of command 'One!' stretch forth the wand; when I say 'Two!' step forward; and on the word 'Three!' 'recover'—that is, step back to the original erect position. 'One!' 'Two!' 'Three!' Very fairly done; it has made some of you warm. Stand at ease and rest!

"As a variation to this exercise, I want you to hold the wand to the right, instead of in front, so that the arm is in line with the shoulders instead of being at right angles. In this movement you will have a better means of pressing the chest to the front. The movements of the legs are precisely the same as when the wand was held to the front."

"What do you mean by pressing the chest to the front, Charles?"

"Ah, that needs a slight explanation. Let me show you. Stand perfectly erect, like this, with your arms hanging loosely down by your sides, like mine; keep the head and neck erect, but not constrained and pressed back; now inspire a deep breath, and let your chest swell outwards. If you repeat this several times it will wonderfully deaërate* your lungs, and afford a great relief if you have been stooping or bending over your needlework."

"That is not the way our governess used to keep our backs straight, and prevent us becoming 'round'-shouldered; she used to go behind us, and pull our shoulders back."

"Yes, Anne, and very likely make you feel a sharp pain between them. Your governess's method of squaring your shoulders and throwing forward your chest was a false one; the muscles were only strained for the time being while she held the shoulders back, but they sunk into their place again as soon as the hold was released. Now the simple method of breathing I have just described will not suffice to give you square shoulders, nor prevent them becoming 'round.' The wand, dumb-bell, and other exercises are to cure you of any tendency to roundness; but the benefit you receive from 'pressing your chest forward' as I have described is this—the deep inspiration you take presses out the thorax, that is the chest, the ribs expand (especially so if you breathe deep down), and that bone† you find just beneath the 'apple' of the throat is pressed out slightly upwards, and the bone‡ that is in the centre of the chest, the one that runs down between the ribs, and to which the cartilages of the ribs are fastened, is pressed forward by the amount of air inhaled. When these two bones stand out in their normal position, you have the greatest capacity of lung-power, and as regards the build of the chest, you have a perfect one, or a natural bust. If, however, these bones—the clavicle and sternum—sink in between the bosom, you are not normally developed; you are weak-chested, and consequently more liable to consumption.

Amber.—*Nature* remarks that though the annual yield of amber from the Baltic Sea amounts to about 300,000 lb., there is sufficient to furnish a supply for 30,000 years.

We learn from "Drinks" that soda and milk, now recognised as a popular beverage, may shortly lead to "sparkling milk." This will, of course, be milk impregnated with carbonic acid gas by the usual mechanical means, and bottled in the usual way as ordinary effervescing drinks. It is stated that this aërated milk will keep for an indefinite period.

Two cases of chronic mercurial poisoning are mentioned by Neukirch, interesting enough owing to the cause—viz., the impregnation of the air of patients' sleeping apartments with mercurial vapour from imperfectly amalgamed looking-glasses. He supposed that such cases, in obscure forms, may be frequent enough, as one of his had suffered for four years before the cause was discovered.

Sugar is a vegetable product; at least, in so far as we know it as a food. Ancient civilisation knew little or nothing of sugar, except as honey. Consequently bees occupied a far higher position among the ancients than they do with us. The bees of Hymettus were justly renowned, and so were those of Hybla; just as the honey of Narbonne is esteemed with us. But when, speaking broadly, all the dishes were sweetened with honey, its importance was infinitely greater than it is now.

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*"Aërate" is a term applied to the impregnation of a body with carbonic acid gas, "deaërate" I use in the sense of expelling that gas.

† Known as the "clavicle," or "collar-bone."

‡ Known as the "sternum," or "breast-bone."

Our Bookshelf

"Reading maketh a full man."—*Bacon.*

SOME WINTER RESORTS.

Southern and Swiss Health-Resorts. By Dr. Marcet. (London: J. & A. Churchill.)

II.

Continuing our remarks on Nice from the last paper, when we were interrupted by considerations relating to space, it is in its position a highly fortunate place, being almost surrounded by hills, which thus protect it in a great measure from the wind. So, for the matter of that, are most of the health-resorts on the south coast of France, and they derive their reputation almost as much from the sheltered nature of their position as the actual difference in latitude; but we think Nice is even more fortunate in this respect than the rest. Only on the north-westerly side, comparatively speaking, is it undefended, for the hills of St. Phillipe are not sufficiently high to form much of a barrier. To the eastward it is sheltered by Mont Boron, some 400 ft. high; while extending from this in a northerly direction are Mont Gros and Mont Vinaigre, which effectually screen it from the north-easterly gales.

Close by these mountains, running north and south, and dividing them from another eminence called Mont Chauvre, which lies in a more westerly direction, is a deep valley, and in the valley a river, the Paillon. Rather a tiresome river this. It is all very well when the weather is fine and dry, presenting then just the appearance of a small, clear stream, at which the washerwomen of the town can wring and beat their clothes to their hearts' desire as it leisurely wends its way towards the sea. But, after heavy rains, its aspect is changed completely. Swollen to some ten times its ordinary dimensions, and having now more the appearance of an infuriated mountain torrent (which in reality it is) than a calm, respectable river, it comes rushing down the hill-side with an impetuosity that is alarming. Away it goes, splashing and foaming, ever working itself into a higher state of noisy indignation, towards the sea, and, of course, the sea, probably not being in a very good humour itself under the influence of the gale, comes dashing in towards the land, and a nice meeting there is between the two, you may be sure, the water by force of the contact being driven up to an immense height, and drenching all the spectators on the beach as it falls down with spray. It is quite one of the sights of Nice, this conflict of the angry little river with its more formidable opponent the sea; the event usually happens about twice during the season. Our chief cause of complaint, against the Paillon at such a time is that it simply defiles the beautiful Mediterranean for a considerable distance round with mud. Perhaps it does it out of spite; who knows?

The climate at Nice is very much the same, as we before remarked, as that at Cannes, the latter, according to Dr. Marcet, being slightly the warmer of the two in winter, an opinion which is fully substantiated by the observations during twenty years of Monsieur Teysseire at Nice, as compared with those Dr. Marcet himself made at Cannes, while it is somewhat strange that the mean temperature at Nice during December should be 2·2 deg. F. higher than at Cannes, though for January and February it is much lower. Of course, it is not necessary to point out that the climate of Nice—that is, the town itself—differs very considerably from the climate of the surrounding hills. The most popular of these during the spring months is the Simiès Hill, an offshoot of Mont Chauvre, before mentioned, and a distance of some fifteen minutes' drive from the town. The sides of the hill are covered with villa residences, and from the summit you can get a very beautiful view of Nice, the bay, and surrounding mountains. The air is particularly pure and bracing, and Dr. Marcet's experience goes to prove that it is often more beneficial in cases of chronic bronchitis and asthma, unaccompanied by inflammatory symptoms, than the atmosphere of the lower-lying town. In this matter of climate, the Simiès Hill is much resembled by Hyères, with this difference, that the air of the latter place is the less irritating of the two, a result probably due to its inland position, it being some three miles from the sea, whereas all the other health-resorts of the French and Italian Riviera are situated in its immediate vicinity.

If we wished to get away to a place where we could be utterly quiet, quite oblivious of the noisy bustle of the world outside, and vegetate, we think we should go to San Remo, on the Italian Riviera, some sixteen miles east of Mentone. The scenery round about is extremely beautiful; and, as Dr. Henry Bennett remarks in his book, "Winter and Spring on the Shores of the Mediterranean," no one can have any idea what sources of pleasure lie in the surrounding valleys and mountains until they have thoroughly explored them. The climate is very nearly the same as that of Mentone, and the temperature considerably higher than that of Cannes or Nice, while there is not that sudden fall in the temperature after sunset which is such a distinguishing feature of Cannes, and against which the invalid has so sedulously to guard. Indeed, the mean temperature of San Remo is higher than that of Cannes, probably not so much because the days in themselves are warmer as that the nights are less cold.

Mentone and San Remo in many respects closely resemble each other. They have practically much the same climate, and both possess the advantage over Cannes and Nice of having few exceptionally cold nights. It is this advantage, over and above that of a higher temperature generally, that has made Mentone such a favourite resort for consumptive patients. From observations taken it would seem that Mentone, in December, is no less than 3 deg. higher in temperature than Cannes, 1 deg. higher in January, and about the same temperature in February; or, taking the mean temperature for the six months from November to April, Mentone has an advantage of 0·7°. These facts are the results of certain observations made by Dr. Andrews, of Mentone, and Dr. Marcet, during five winters at Cannes, and it is not difficult now to see why Mentone should be so popular with this class of patient. The relative atmospheric humidity is the same at both places, but whereas rain falls more frequently at Mentone than Cannes, the actual rainfall, as Dr. Marcet points out, is less, so that not only does it rain more at the French watering-place, but it rains more heavily at the time. This, however, our author tells us, is not to be wondered at, since "the cold, damp, north-easterly, and easterly winds being felt less in Mentone that at Cannes, there is a diminished tendency to condensation of moisture." After this it is perhaps more interesting to know that, according to Dr. Bennett (whom we notice Dr. Marcet quotes rather extensively in his book) the health of the native population at Mentone is exceptionally good, and Dr. Bottini, who practised for over half a century in the district, also tells us that the average duration of life there is 45 years, while a very considerable proportion of the inhabitants live to over 70 years of age.

The island of Madeira is scarcely so well patronised by

invalids as it might be. No doubt this is in a measure owing to its distance from home; and many people, when in a weak state of health, nervously shrink from a sea voyage; but what, after all, are four days—sailing, we will say, from Dartmouth on Friday, and reaching Funchal, the chief town of Madeira, on Tuesday? And really, under the tender care of the "Donald Currie" line of steamers, you hardly think of them at all, unless it be to sigh with regret when they are over, and wish that you were going on to the Cape. The chief advantages Madeira offers are a high temperature, remaining very much the same all the year round, and a comparatively moist atmosphere. The place is highly suitable for patients who, after living a number of years in a hot climate, like the East or West Indies, have returned home with an enfeebled constitution, the result of fever or liver disease, and to whom the air of Cannes or Nice, though well enough in the summer time, is too cold in the winter, or who from any other cause, have lost the power of generating vital heat. The mean winter temperature at Maderia is no less than 13·1 higher than that of Cannes. It is warmer during the winter, and colder during the summer than any of the other health-resorts we have mentioned, and the temperature varies very little, either between one season and another, or from day to day. About three times during the summer a hot, dry wind, the *Leste*, corresponding to the African "sirocco" or "harmattan," sweeps across Madeira with great velocity from the east, and, for the time being, matters are anything but pleasant, the lips and skin dry, throat parched, and a most objectionable temperature, sometimes as high as 90 deg. in the shade; but this only lasts, as a rule, for three days, and then all is over. This leste wind has even been known to bring locusts with it, transporting them a distance of 360 miles over the sea; and most unfortunately they were alive when they arrived.

As a rule consumptive patients do not derive much benefit from Madeira, and we should scarcely recommend the place to them, except under exceptional circumstances. In some cases, however, the climate undoubtedly affords relief—indeed, in a matter like this it is impossible to lay down a hard and fast rule. But it is in its tendency to allay all inflammatory affections, whether of the pulmonary or digestive organs, the muscles, joints, or other parts of the body, that Madeira is chiefly to be advised. Therefore in many of the cases of inflammatory bronchitis and asthma for which, as we pointed out in the previous paper, the dry climate of Cannes or Nice would be injurious, the warm, moist atmosphere of Madeira would be more highly beneficial.

With every year the number of English people seeking the benefit of these southern health-resorts, some few of which we have briefly commented upon in these papers, is increasing. Travelling expenses are becoming cheaper, modes of transit there and back more convenient, and the comfort of English visitors on the Continent better considered. The natural shyness, the "stay-at-homeism," of our insular character is getting rubbed away. We want to see more of our neighbours, to imbibe their fresh air and feel better for it; and this desire is spreading to the mass of the people. There is a greater inclination also to look after our health as well as our recreation when we go away from home, if we be not practically invalided—men and women are beginning to take a stronger, more intelligent interest in these matters. It is in this belief that we hope shortly to commence a series of articles on "Foreign Health-Resorts," treating the subject in much the same way as we did the "English Health-Resorts" last year—articles which, we have reason to believe, afforded much satisfaction and information to our readers.

The "Spécialité" Lime Juice, for family daily use throughout the year, has not the usual musty flavour; will not turn mouldy; may be obtained of Chemists and Grocers.—Feltoe & Sons, Albemarle-street, London, W.—[Advt.]

International Health Exhibition.

LONDON, 1884.

SIXTH PAPER.

MEMORANDA FOR THE GUIDANCE OF EXHIBITORS,

Drawn up by the Sub-Committees and approved by the Executive Council.

Dress.

Class 17A has been added to the Classification at the suggestion of the Sub-Committee. Under it should be displayed a number of illustrative specimens to show the comparative value of different dress fabrics, with reference to their "warmth," their hygroscopic properties, the influence of the colour of materials in modifying the effects of sun-heat, and the like.

It would be well to show under this class models and drawings illustrative of the effects of poisonous dyes (in clothing) upon the skin. Materials dyed with poisonous and non-poisonous dyes could be placed together for purposes of comparison.

The scope of this class may be considerably extended, and the section be made to demonstrate the scientific bases of healthy clothing.

The subject of Underclothing is of such great importance that the Sub-Committee are prepared to arrange for a special display of materials and garments, &c., worn next to the skin. Some of these will be shown in a special annexe, to which females alone will have access, or which will at least not be open to both sexes at one time. As one special feature in such an exhibition, the Sub-Committee would suggest a series of models displaying the first clothing of infants as adopted in the various countries of the world—so far as such examples could be obtained.

Class 13. It is suggested that, as far as possible, dresses and costumes shown should be displayed upon lay figures, and that the exhibition of ancient costumes should be encouraged in preference to modern reproductions of the same.

Class 15. It is suggested that the subject of suitable dresses for extreme climates should be demonstrated with as much detail as possible.

Class 16. Under this class it is suggested that especial attention should be given to dresses suitable for women engaging in exercise, such as dresses for mountaineering, for the moors, for swimming, for horse exercise, for gymnastics, and the like.

Class 17. Under this class should be actually demonstrated the value of certain substances used for making muslin and light fabrics non-inflammable. The various artificial starches made for this purpose should be displayed, and their use and effect demonstrated.

The dress of female operatives engaged among machinery may be dealt with in this class; also special dresses recommended or in use in factories and occupations of special character, *e.g.*, dresses for lead and other factories; dresses of nurses and sick attendants; of soldiers and sailors; life-saving dresses; firemen's dresses.

Class 18. Under this class will be exhibited dress injurious to health, casts of feet deformed by boots, &c., spinal and thoracic deformities ascribed to tight-lacing; models to show the position of the viscera displayed by such practices, and the like.

Class 19. The Sub-Committee would suggest the following under this heading:—Machine *versus* hand-weaving; glove-making by machinery; lace-making, illustrated by operatives from Honiton, Nottingham, Brussels, &c.; the making of hats; the making of boots and shoes, and of lasts for the same; the dressing of furs and certain skins; sewing and knitting-machines, &c. (in limited number); the manufacture of waterproof fabrics; the making of crape and some special fabrics; the application of jute to the manufacture of dress fabrics; imitation fabrics.

Alcohol from Melons.—A French investigator has succeeded in extracting alcohol from the pulp of melons. Alcoholic fermentation does not take place in the pulp, notwithstanding the sugar it contains, until sulphuric acid is added. Five litres of alcohol can be extracted from thirty kilogrammes of pulp.

Our Letter : Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 74-76, *Great Queen-street, London, W.C. Those intended for the Publishing Office to be sent to* "THE PUBLISHER," *at the same address.*

Contributors are requested to send stamps for the return of the MSS. *in event of non-acceptance. Every care will be taken to ensure the safety of* MSS., *but the* EDITOR *and* PUBLISHERS *cannot hold themselves responsible for accidental loss.*

Correspondents are requested to write on one side of the paper only. The EDITOR *disclaims responsibility for the opinions expressed by Correspondents.*

LETTERS TO THE EDITOR.

DESTRUCTION OF DISEASE GERMS BY FILTRATION.

SIR,—In availing ourselves of your request that we should place before you evidence regarding the destructive power of spongy iron on disease germs, we beg to submit:—

1. That the "germ theory," however strong the indications in its favour are, is still a theory, therefore surrounded with a certain amount of doubt, and the same must be the case with all questions bearing on this subject.

2. That there is every reason to believe that such epidemic diseases as cholera or typhoid are caused by bodies of the nature of bacteria. These are words used by Prof. Huxley. Similarly, Dr. Cameron, M.P., in his classical little work, "Microbes in Fermentation, Putrefaction, and Disease," remarks that precisely similar organisms to those occurring in the body in certain diseased conditions are inseparably connected with the processes of fermentation and putrefaction.

3. That the specified zymotic disease germs have not as yet been isolated with sufficient certainty to allow of our tracing their presence or absence under the microscope.

4. That direct experiments upon animals are impracticable, because no animal—*perhaps* excepting the monkey—takes human typhoid or cholera.

5. That there is reason to assume that ordinary bacteria and disease germs are destroyed under similar conditions and by the same agents.

More might be said about every one of these points than would fill the space which, with all indulgence, you can allow us, and we must therefore confine ourselves to such further proof regarding them as you may desire. We now contend that Prof. Bischof has proved in his papers communicated to the Royal Society and the Society of Medical Officers of Health, that wet spongy iron has strong antiseptic properties. We further contend that Mr. Frank Hatton, in the paper referred to in our last letter, has fully confirmed these conclusions, and that he, in fact, found that wet spongy iron, even when added to liquids, *without any mechanical filtration*, has a more destructive action on bacteria than several of the strongest poisons and antiseptics. This action evidently must be *chemical*, be it actual destruction or poisoning. In connection with Mr. Hatton's experiments, any one may repeat the following. Fill some vessel to one-half, say, with well-made fresh butter. Fill up with water and the butter will soon putrefy. Now place into the top part of another vessel, similarly filled with fresh butter and water, some spongy iron tied into a piece of calico. If it is then found that the butter does not putrefy in the latter case, what must be the explanation?

The researches made on the subject at Netley (XIX. Army Med. Rep., p. 170) also point to the destruction of bacterial life by spongy iron.

Lastly, Professor Elias Heyman, of Stockholm has repeated and confirmed Professor Bischof's experiments ("Hygeia," 1881).

We all must bow to practical experience. Whatever construction you may put upon the extracts from reports, which we beg to enclose for your perusal, it is undeniable that it was feared at one time that, owing to the state of the water supply, zymotic disease would become epidemic in the military station at Fort George, in Scotland, and that in the following year, after spongy iron filters had been introduced, all complaints, "so loud before," ceased. It appears that at Shoeburyness the garrison was surrounded by epidemic typhoid, and not a single case occurred amongst the troops, which had been provided with spongy iron filters. Such cases certainly support, to some extent at least, the theoretical considerations in the first part of this letter.

The difficulty which many experience in following our arguments is that they cannot understand how such a harmless substance as spongy iron could possibly be endowed with a destructive power which, as Mr. Hatton showed, several strong poisons fail to possess. But, sir, the presence of protosalts of iron in a soil is looked upon as a sure sign of barrenness, which means that such salts are destructive to vegetation. When water passes through spongy iron, ferrous hydrate and carbonate are formed. These are the most unstable ferrous compounds, therefore the most powerful in their chemical action. Disease germs being generally classified amongst the vegetable kingdom, there is nothing whatever surprising in the supposition that they are destroyed by the same influence as other plants.

Taking all this into consideration, we think we are justified in claiming for wet spongy iron, with a considerable degree of probability, the destruction of disease germs. At any rate, we submit that this probability is infinitely greater in favour of spongy iron than of any other known filtering medium. Indeed, not even an attempt has been made to produce any such evidence in favour of any material but spongy iron. In a paper read at Berlin on June 23, 1883, Dr. Koch says:—

"Prof. Von Rozsaheggi has similarly tested a number of filters (by means of Dr. Koch's nutritive gelatine), such as are frequently used for household purposes. Almost without exception, they did not diminish the bacteria. In one instance which has recently been investigated by me, I have shown that a filter may actually deteriorate the water. The coarser impurities accumulating in the filtering medium, putrefy, and cause large numbers of bacteria to be mixed with the filtered water."

These experiments, we have been informed on inquiry, do not include the spongy iron filter, which is still under investigation. We are thus confident that in the course of time the case of spongy iron will be still further strengthened, and if Dr. Koch takes this matter in hand, we may perhaps hear something about the action of spongy iron on the bacillus of cholera.—We remain, Sir, your most obedient servants,

THE SPONGY IRON DOMESTIC FILTER COMPANY.

22, New Oxford-street, W.C., *March* 18, 1884.

[This letter will be subsequently noticed.—ED. H.]

QUERIES AND ANSWERS.

[IMPORTANT TO CORRESPONDENTS.—We have again to call attention to the fact that, while every effort is made week by week to deal with the enormous mass of correspondence which reaches us, we cannot undertake to answer queries save as space permits. All queries are attentively considered and replied to, but in no case can any query be answered in the same week as that in which it is received.]

[A number of replies have been crowded out of the present number owing to pressure in space. These replies will be duly given next week.]

[Letters addressed otherwise than to the *Editor* of HEALTH, at 74, Great Queen-street, London, W.C., will not be attended to.]

GENERAL.

INTRICATE.—We have never heard of the process to which you allude.

J. COLEMAN.—Apply to the publishers, who will send you a complete catalogue of their works.

G. SHORE.—The gentleman resides in London, and you will find his address in the "Directory."

CARVILL.—Counter-irritation is a term applied to medical means for inducing the absorption and disappearance of indolent swellings and like ailments. The blister is a familiar example of this process.

G. B.—Saint Vitus' dance is named St. Weit in Germany and St. Guy in France. It usually affects girls between six and sixteen, and, as a rule, is confined to the left side.

J. AITKEN.—See our articles on "Starvation."

OXY.—We should imagine your best course would be to place yourself in the hands of a respectable solicitor. If the quack threatens you, he should be dealt with severely under the charge of attempting to extort money by threats.

INVALID CARRIAGE.—Miss Ellen Millman, Tenby, South Wales, would be glad to know where a second-hand invalid carriage could be procured for a child, aged seven years, suffering from spinal complaint, and whose parents are extremely poor.

T. C. Packenham.—The system is a good one. We have found it serviceable. It may not suit every person equally—no system can—but it is the best of the kind we know.

O. E. R. S.—Huxley's "Lessons on Physiology" (Macmillan), and Cleland's "Physiology" (Collins, Sons, & Co.) are likely to suit you. More advanced treatises are those by Dr. Foster (Macmillan), Hermann, and Carpenter.

SANITARY.

C. Dewar.—The filter subject is undoubtedly a sore one, each firm claiming superiority over all its neighbours. We believe that various filters may each satisfactorily discharge their duties, but the question you raise is a far more serious one. See "Letters to the Editor" and "Notes by the Way," Health, Nos. 49 and 51.

J. G. C.—We believe the works in question were carried out by a perfectly competent engineer.

Onyx.—For ventilating gas-burners and globes apply to any manufacturer of sanitary apparatus, or to a wholesale house dealing in gas-fittings.

MEDICAL.

G. O.—We think you should try the effect of inhalations, such as that recommended to "T. S." in Health, No. 50. If you require a tonic, that recommended to "Allan Grey," in present number would suit you. In all probability you suffer from a slight form of bronchitis. A bismuth tablet should aid in relieving the stomach acidity.

Allan.—You appear to suffer from the usual symptoms of indigestion. See advice given to "A. H. E." in present number.

H. L.—Yours is a case in which you should see a good surgeon, who alone can pronounce as to the nature of the swelling. We can send you the address of such, if you desire it, on receipt of a stamped addressed envelope from you.

J. Shaw.—You appear to require a tonic. The following should suit you:—Citrate of iron and quinine one and a-half drachms, carbonate of ammonia two drachms, tincture of orange-peel two ounces, water to make up six ounces. A tablespoonful thrice daily. If not better write again.

Dart.—Use cold sponging every morning. Sleep on a hard mattress. Avoid fluids late at night, and take plenty of open-air exercise. And for a short time take the tonic recommended to "Allan Grey," in present number of Health.

Tokar.—In a case like yours, we should strongly urge you, if convenient, to go for a thorough change. The advice given to "Dart" above should be followed. What you complain of is perfectly natural in a healthy person, and it is only quacks who exaggerate its importance. The step you propose to take should be regulated strictly by your general health.

Mac.—Give up tea and coffee, and try cocoa instead. Rest after meals, and see general advice given to "A. H. E.," in present number regarding indigestion. Glad to be of any further service, if needed.

Hygeia.—See advice given to "Anxious Inquirer," in Health, No. 49. You must certainly give up the habit of trifling with aperients. If you have not tried a vegetable dietary we should recommend you earnestly to try the effect thereof. Such a dietary often cures obstinate cases.

S. A. Jonah.—We do not for a single moment place the slightest reliance on the advertisement you send. The person who advertises is a qualified medical man; but his practice of advertising and the statements in the advertisement are of such a nature as to practically make the announcement one savouring strongly of quackery.

James Govan.—Do not be morbid or think you are in any way ill. What you complain of is very often perfectly natural. See and follow advice given to "Dart" in present number of Health.

Jochim.—See advice given to "Hairy Face," in Health, No. 49.

Student Anxious.—See advice given to "Dart" in present number. The tonic you mention will do you good. Above all, avoid morbid thoughts, and do not fancy you are in any way ill.

A. H. E.—We advise you to give up tea and coffee entirely, for a time at least, and let your food consist of milk, eggs, light soups, puddings, &c. A little beer might do you no harm with dinner, but stimulants should be avoided. Rest after meals is essential, and you might benefit from taking a little Pepsine with your food.

Much Perplexed.—The question you ask is a difficult one to answer. We know the book to which you refer, and, although not a quack production in any sense, some of its statements are over bold, and require modification. We should say that individual circumstances, after all, most fully determine the best course for you to pursue. Perfect health may frequently be enjoyed, contrary to the opinion of the book you name.

S. F.—Any medical man will make such an analysis as you require. We can send you an address (if required) on receipt of a stamped addressed envelope.

Smith.—1. Yes. 2. The tonic recommended to "Allan Grey," in present number of Health. 3. You do not enclose any such paper as that to which you refer. 4. Person you name is a qualified medical man, but a thorough quack in his advertising practices and somewhat injudicious statements. 5. Any qualified practitioner in Manchester is far more competent to treat your case than any advertising quack, qualified or not.

William.—Egyptian loufs can be obtained at any chemist's. Give up tea and coffee, and try the effect of a little "Æsculap" water taken in the mornings as a mild aperient. Remember that habit has much to do with the cure of the ailment of which you complain. Select your food wisely, and try vegetarianism. Take more open-air exercise. Growth can only be increased by good food and plenty of open-air exercise. Retire early to bed, and see that your room is well ventilated.

Crypto, &c.—Kindly exercise in future a more judicious choice of a *nom de plume*. We have no space to spare for elongated foolishness, and in future address the Editor, not Publisher. You suffer from symptoms of indigestion. Rest after food, and take a little "Pepsine" with the food. For face pimples try the lime powders recommended to "Hairy Face" in Health, No. 49.

Lamp-post.—Not if taken judiciously as a cleansing measure once or twice weekly. The water ought not to be too hot in any case.

J. X. J.—Apply sulphur ointment for itch as follows:—Sublimated sulphur two drachms, carbonate of potass one drachm, lard one ounce. This ointment is to be rubbed in firmly over the affected surface, except face and head, for three successive nights. On the fourth day it must be washed off by a warm bath, and the underclothing changed. See to your clothes, and have them fumigated with burning sulphur, or destroyed, as the parasites will most likely remain therein.

Agamemnon.—We fancy you simply suffer from indigestion. Give up tea and coffee, and follow, as far as possible, the recommendations given to "A. H. E.," in present number of Health. Pepsine should be taken with your food, and rest after food is necessary. Write again if not better.

Tom.—You cannot expect to be well in a short time. You are over-impatient. Continue to follow our former advice. From your own accounts there is nothing whatever in your case to indicate that you are in any way ill. What you mention is perfectly natural. Give up morbid thoughts.

W. Murray.—Attend strictly to cleanliness, and wash frequently. Use a little plain Vaseline to the part. See advice to "Dart" in present number, and don't be morbid, inasmuch as you suffer from no disease. Time, patience, and attention to our advice will effect a cure.

Despondent.—As far as we can judge, we simply think you are out of sorts. Certainly, a sea voyage would benefit you much, or even a simple change of air. You must not be despondent. Let your food be light and nourishing, avoid constipation, and take a little "Pepsine" with your food. Possibly a change of air would relieve all the symptoms of which you complain. Glad to be of any further service.

Ninon.—If you look through the paragraphs of general hints of recent numbers of Health, you will find a cure for corns. Have your boots made roomy. 2. Not except by simple attention to the nourishment of the body. 3. Try a little good claret taken along with meals. 4. Cod-liver oil cream, as advertised in our columns, would suit you better than the plain oil.

Walter Brown.—Don't take purgatives. They will do no good, and may do harm. You only require care and attention in the matter of your digestion. Let your food be largely fluid for a time—milk, soups, Brand's Beef Essence, puddings, &c.; and after each meal see that you rest. If you do not rest after eating, you are certain to continue to suffer. After meals take a powder, consisting of four grains powdered rhubarb and three grains pepsine. Write again, if not bettered.

E. R. F.—See that your room is well ventilated, and try the effect of a green-shaded reading-lamp. Use your eyes as little as possible at night for a time, and bathe with cold water frequently. If not improved, write again.

South Wales.—We believe the preparations are good, but we prefer the tonic you name, which is well adapted for you. See also advice to "Dart," in present number of Health.

C. S.—Fresh fish, boiled or fried—haddock, whiting, cod, &c.; also oysters and shell-fish generally. An ordinary diet, however, into which fish enters, should suit you. The tonic recommended to "Allan Grey," in present number of Health should suit you. It is not to be taken continuously or for long periods.

Imogen.—In some cases the opinion you name may be correct; as a rule, if any ailment exists, such a step only intensifies it. Let the patient take fifteen drops *Fer Bravais*, in water, thrice daily; and use weak injections of Condy's Fluid (one part to twenty or thirty water) and tepid water thrice daily for a time. Rest is necessary, and attention to general health. A little Pepsine should be taken with the food daily. Glad to be of further service, if necessary.

J. J. Rousseau.—Use weak injections of Condy's Fluid and tepid water (one part to twenty or thirty water) thrice daily. You must rest; pay great attention to state of bowels; no stimulants; and take the *Fer Bravais* as above ordered to "Imogen." A change of air (say to the sea) would be very likely to hasten your cure.

A. W. G.—Thanks for cutting.

James Wright.—Try the Moorfields Eye Hospital, London. Inquire at any of the hospitals regarding the pay-system. At St. Thomas's Hospital there are wards for paying patients, and a good eye department as well.

Dreadnought.—See and follow advice to "Dart" in present number of Health. Don't be morbid. Your cure consists in cold sponging, open-air exercise, sleeping on a hard mattress, and avoiding all stimulants.

El Teb.—We fancy the book is published by Messrs. Kegan Paul & Co. Dr. Smith's "Foods" is published by that house. Albuminaria is a kidney disease of complex nature and varying type. It is always of serious nature. We cannot undertake to describe either disease or treatment in our columns. Consult a physician.

Maritus.—We do not think there is any harm, save that, according to some authorities, the practice is apt to produce nervous symptoms in some cases, or even to set up irritation. We should say it could be hurtful (if it is injurious at all) to you only. We confess that, while there are foreign authorities who condemn the practice, we have never met with any evidence to show that it is hurtful. You must, by careful watching, be the best judge of your health.

James Ross.—See hair lotion recommended to "Russell," in Health, No. 48.

Crichton.—Give up coffee entirely. See advice to "Walter Brown" in present number of Health, regarding light diet for a time, by way of giving the stomach rest. Take the powder recommended to him, and, above all, rest after meals. Glad to be of any further service. Have you tried vegetarianism? It might suit you.

Goldenrod.—Use camphorated chalk, and a moderately hard brush, and brush the teeth morning and night.

Exile.—We fancy you would be the better of alternating with the mercury (say for a week or ten days at a time), a mixture consisting of iodide of potass, 2 drachms; infusion of columba, 6 oz. —a dessert-spoonful thrice daily. Use a little chlorate of potass as a gargle for the mouth. Clothe warmly, avoid stimulants and over exertion. Your cure should be complete in about two years or so; but you had better see an Edinburgh or Glasgow surgeon periodically. We can send you address of a reliable authority in either place if you send stamped addressed envelope.

James Scouler.—Symptoms too complex for popular description. There is no fear of your health, we should say. Don't be morbid. Your symptoms are only those of a little indigestion.

A. B. C. W.—Moderate doses of quinine (say 2 grains sulphate of quinine in the form of a pill twice daily) would be highly useful in your case, and a change of climate is likely to be beneficial. Avoid all damp districts. Attend carefully to general health, digestion, warmth, &c. If any pain exists, 15 grains bromide of potass, taken in a wineglassful of water on going to bed, may be serviceable.

S. A. S.—Consult advertising pages of *Lancet* for addresses of those who profess to cure stammering. A book has lately been advertised in the *Pall Mall Gazette* on this subject. You should see it. We know of no cure, save time, patience, and special exercises.

Psoriasis.—We fancy you are in a low state of health, and are possibly overworked. If you send a stamped addressed envelope, we think we can put you in the way of obtaining a medical opinion which may benefit you. The skin disease from which you suffer is probably only an indication of general weakness. If your general health becomes re-established, you may possibly require no further treatment. We have every sympathy with you in your troubles.

A Mother.—We should recommend the application of a little pure Vaseline as a preliminary measure. Bathing likewise with a solution of chloralum and water—one part chloralum, and say ten of water—may also relieve the symptoms. If this does not do good, write again.

H. T.—1. Malignant growths rarely appear so quickly; but it is difficult to say. Pain should be a sign of malignant nature. What is said to be the nature of the growth? 2 and 3. Depends on nature of disease. If you state symptoms to us, we will endeavour to assist you to the best of our ability. Possibly, the sudden growth *may* have been only an awakening of some long-existent lesion. What is the patient's history?

R. Coombs.—We still recommend you to attend strictly to cleanliness, washing night and morning with tepid water and Cleaver's Terebene Soap. By the use of a little pure Vaseline applied to the part you will probably obviate your annoyance. As you say the affection is periodical, we should advise you to take, when the attack threatens you, a little quinine.

Reaping.—Don't be morbid. You will get quite well by attention to very simple rules. Exercise strict cleanliness, and use injections of tepid water as recommended to "Imogen" in present number of Health. Take also the tonic recommended to "Allan Grey" in present number. Cold sponging, if it can be borne, should be practised by you each morning. Avoid all stimulants and let your food be light. You suffer from no serious ailment whatever.

A. M. W.—Try the effect of a saturated solution of boracic acid for washing the parts, instead of alum. A course of Turkish baths, carefully taken, so as not to weaken you, might also do good. Let us know how you are in a few weeks.

J. H. G.—[Will please note that he should address the Editor of a periodical, and not the publisher, where information is requested.] For the ailment you mention the diet should be non-stimulating. A blue pill, or podophyllin pill, should be taken occasionally. When an attack comes on, medical advice must be sought, as the ailment may arise from a variety of causes, each requiring the attention of a physician.

J. Targett.—Yes, natural, if not occurring too frequently. Avoid quacks and advertised medicines.

Cymro.—1. You might use a lotion, consisting of one part myrrh, eau-de-cologne sixteen parts, borax one part, water and syrup three parts each. 3. The practitioner is a qualified medical man. We know nothing of his method of treatment.

E. J. D.—Simply apply an ordinary porous plaster over the seat of the pain. Should it continue, have the chest examined by a surgeon. The probability is you have merely sustained a bruise. 2. You should have your eyes examined by an oculist. The typewriters you inquire about were noticed in Health in three articles, which you will find in the part for October last.

J. R.—We should advise you to try the effect of taking cod-liver oil for a lengthened period, after your food, by way of strengthening you. If this simple treatment does not improve your health, we should advise you to undergo a thorough examination by a physician. It is quite evident you require rest, and, in all probability, a change of air would likewise be beneficial.

Anxious.—You are evidently highly nervous, and you have undoubtedly a tendency to magnify your complaints. We think we can most satisfactorily aid you by offering to send you the address of a reliable London physician, who will examine and advise you regarding your state.

Clement.—You were surely replied to in a previous number under another designation. We can only repeat here that the child should have the syrup of iodide of iron with the cod-liver oil. The medicine should be given after meals. Avoid using enemas, and give a simple liquorice powder instead. See to the diet, and that there is nothing irritating in the food.

Aristotio.—There is no doubt you have had a somewhat severe illness, but we cannot say that the treatment has been in any way ill-adapted for you. If you will send a stamped addressed envelope we shall put you in the way of obtaining a thoroughly reliable medical opinion.

J. H. S.—We are sorry that we cannot find the reference to suppositories to which you allude. Are you sure it appeared in our columns? Premonitory symptoms of the diseases you name are respectively, fever, flushing, difficulty of swallowing, &c., and a blue line along the gums, diarrhœa, and dropping of the wrists.

Weekly Reader.—Thanks for the pamphlets, which we had seen before. They are a rich treat in their enumeration of the "aids to beauty," hair dyes, and nose-adjusters. How long will quackery like this flourish? As long as there are fools in the world, and so long as ignorance of what health means, prevails. Again, many thanks.

Lorelei.—1. Pulvermacher's Belts (194, Regent-street, London, W.) are thoroughly genuine. They produce powerful electric currents (see Mr. Lant Carpenter's descriptions of them in Health), and are in every sense effective. Most of the belts you see advertised are merely pieces of red flannel with bits of zinc or copper sewed into them. They are as thorough frauds as ever gulled the public. Give your patient the tonic recommended to "Allan Grey" in present number of Health. 2. You mean Dr. Carter Moffat's "Voice-Improver." We do not know anything of its effects, and we believe it can only be had of the inventor. We doubt if any such invention can permanently improve the voice.

[*Continued on page* 416.

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Allan Grey. No necessity to be alarmed. Continue treatment ordered, and take a teaspoonful of Fellows' Syrup of the Hypophosphites thrice daily in a wineglassful of water an hour or so before food.

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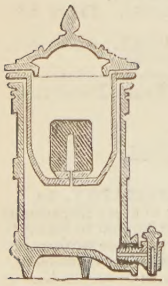

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